

CLAIMS

I/we claim:

1. A headlamp for a vehicle which forms a light distribution pattern having a horizontal cutoff line on an upper end, comprising:

a plurality of first light irradiation units that form the horizontal cutoff line by light,

each of the first lighting units including,

a first light source formed by a semiconductor light emitting unit having a substantially rectangular light emitting chip and facing forward such that one side of the light emitting chip extends in a horizontal direction, and

a first projection lens located in front of the first light source and serving to project an image of the first light source as an inverted image forward from the lighting unit.

2. The headlamp according to claim 1, wherein the substantially rectangular light emitting chip of the first light source is relatively long in a horizontal direction.

3. The headlamp according to claim 1, further comprising a plurality of second light irradiation units that form an oblique cutoff line that rises from the horizontal cutoff line at an angle,

each of the second lighting units including,

a second light source formed by a semiconductor light emitting unit having a substantially rectangular light emitting chip and facing forward such that one side of the light emitting chip extends in an inclined direction at the angle with respect to a horizontal direction, and

a second projection lens positioned in front of the

second light source and serving to project an image of the second light source as an inverted image forward from the lighting unit.

4. The headlamp according to claim 3, wherein a shape of the light emitting chip of the second light source is substantially rectangular and extends relatively long in the inclined direction at the angle.

5. A headlamp which forms, on an upper end, a light distribution pattern having an oblique cutoff line extended at an angle with respect to a horizontal direction, comprising:

a plurality of light irradiation units that form the oblique cutoff line,

each of the lighting units including,

a light source formed by a semiconductor light emitting unit having a substantially rectangular light emitting chip and provided to face forward such that one side of the light emitting chip is extended in an inclined direction at the angle with respect to the horizontal direction, and

a projection lens positioned in front of the light source and serving to project an image of the light source as an inverted image forward from the lighting unit.

6. A headlamp for forming a light distribution pattern, comprising:

a first lighting system including,

at least one first light emitting unit that is substantially rectangular and faces forward, and is shifted with respect to an optical axis of the headlamp, and

at least one corresponding first projection lens that projects an image of light generated by said at least one first light emitting unit,

wherein said image is substantially inverted.

7. The headlamp of claim 6, wherein said at least one first light emitting unit comprises:

a first type of the at least one first light emitting unit having a first focal length with respect to the at least one first corresponding projection lens; and

a second type of the at least one first light emitting unit having a second focal length with respect to the at least one first corresponding projection lens, wherein said first focal length is greater than said second focal length.

8. The headlamp of claim 6, further comprising a lens cover that is translucent.

9. The headlamp of claim 6, wherein said at least one first light emitting unit is shifted by one of (a) being inclined at an angle with respect to a horizontal direction, and (b) being positioned rightward and upward from said optical axis.

10. The headlamp of claim 6, wherein said angle is about 15 degrees.

11. The headlamp of claim 6, further comprising a second lighting system the includes:

at least one second light emitting unit that is substantially rectangular and faces forward, and is shifted upward and is in-line with said optical axis, and

at least one second corresponding projection lens that projects substantially inverted light generated by said at least one second light emitting unit.

12. The headlamp of claim 11, further comprising a lens cover having a plurality of vertically striped diffusing lens units adjacent to at least one corresponding second projection lens of said second light system.

13. The headlamp of claim 11, wherein said first lighting system is positioned below said second lighting system in said

headlamp.

14. The headlamp of claim 11, further comprising a third lighting system comprising:

at least one third light emitting unit that is substantially rectangular and faces forward, and is shifted upward and rightward with respect to said optical axis, and

at least one corresponding third projection lens that projects substantially inverted light generated by said at least one third light emitting unit, wherein said at least one first light emitting unit of said first lighting system is inclined at an angle with respect to a horizontal direction.

15. The headlamp of claim 14, wherein said third lighting system is vertically positioned below the first lighting system, which is positioned below the second lighting system.

16. The headlamp of claim 14, wherein said angle is about 15 degrees.

17. The headlamp of claim 14, further comprising:

a first type of the at least one first light emitting unit in said first lighting system having a first focal length with respect to the at least one corresponding first projection lens;

a second type of the at least one first light emitting unit in said first lighting system having a second focal length with respect to the at least one corresponding first projection lens;

a first type of the at least one second light emitting unit in said second lighting system having a third focal length with respect to the at least one corresponding second projection lens;

a second type of the at least one second light emitting unit in said second lighting system having a fourth focal length with respect to the at least one corresponding second projection lens; and

the at least one third light emitting unit in said third lighting system having a fifth focal length with respect to the at least one corresponding third projection lens,

wherein said first focal length is greater than said second focal length, said third focal length is greater than said fourth focal length, and said fifth focal length is less than any of said first through fourth focal lengths.